TURBINE VIBRATION/ BEARING TEMPERATURE STATUS

876 1/21/2003 9:42:58 AM

	UNIT 1			UNIT 2			ALARMS	
	GE Shaft Riders (mils)	B/N Prox Prob X/Y (mils)	Bearing Temp F	GE Shaft Riders (mils)	B/N Prox Prob X/Y (mils)	Bearing Temp F	Vibr Alm/Trp	Brg Tmp Alm/Trp
Bearing T1	0.59	0.82	197	2.70 **	4.12	198	5.0/ 7.0	
HP Turbine		2.23			3.61			225/ 250
Bearing T2	2.59	3.93	170 **	3.08 **	3.61	188	5.0/ 7.0	
Coupling A		4.87			2.40			225/ 250
Thrust Brg inactive (frnt)- top/bot		5	147 142		4	148 144	10	225/ 250
active (rear)- top/bot		2	157 159		3	153 150	20	225/ 250
Bearing T3	3.73 **	4.18	206	2.64	4.01	192	5.0/ 7.0	
IP Turbine		1.76			4.43			225/ 250
Bearing T4	2.68	3.32	204	2.44 **	3.04	213	5.0/ 7.0	
Coupling B		2.18			2.18			225/ 250
Bearing T5	0.51	2.75	189	0.46	1.26	219 **	5.0/ 7.0	
LP A Turbine		3.25			2.88			225/ 250
Bearing T6	1.73	1.74	180	1.55	1.90	192	7.0/ 10.0	
Coupling C		1.80			0.49			225/ 250
Bearing T7	0.23	1.35	192	0.81	2.29	186	7.0/ 10.0	
LP B Turbine		0.64			0.62			225/ 250
Bearing T8	2.05	2.09	180	1.50	0.78	185	7.0/ 10.0	
Coupling D		1.63			0.52			225/ 250
Bearing T9	0.37	0.67	183	0.95	3.13	196	7.0/ 10.0	
LP C Turbine		0.59			1.15			225/ 250
Bearing T10	1.32	1.39	180	2.47	3.45	184	7.0/ 10.0	
Coupling E		0.79			2.09			225/ 250
Bearing T11	0.82	1.05	177	1.51	1.36	192	7.0/ 10.0	
Generator		0.86			0.87			225/ 250
Bearing T12	1.52 **	1.18	174	1.32	0.92	175	7.0/ 10.0	
		0.82	174		0.74			225/ 250
Steady bearing								
Bearing T13	1.47	1.19	148	1.90 **	2.09	144 **	5.0/ 7.0	
		1.03	148		1.43			225/ 250
Highest TGSI bearing vibr		0.13 ??		0.12 ??				
Highest TGSI Jrnl Brg Spk Diff T		319 ??				320 ??		
2nd high TGSI Jrnl Brg Spk Diff T		320 ??				322 ??		
TGSI Thrust Brg Mon- Max Tmp frnt/rear		148	160			149	154	

	UNIT 1		UNIT 2	
Load, gross (coax/tgsi)	876	870	899	888
Turbine RPM	3601		3602	
Turb Lube Oil Temp (cold/hot)	114	150	114	149
Turb Lube Water Temp (cold/hot)		91		89
Turb Lube Oil Header Press		52		49
Eccentricity Turb Stand/ High (in)	0.05	0.28	0.05	0.28
Differential Expansion 1&2 (in)	0.49	0.46	0.54	0.33
Rotor Expansion (in)	1.07		0.98	
Shell Expansion 1&2 (in)	1.76	0.90	1.74	0.95

NOTES:

Bearing Temp- high bearing trip point at 250F is manual (not auto)
Rotation CCW (T to G), B/N probes 1st probe w/rotation is X (right side)
Shaft riders- 60 degr from r horz joint, B/N- 45 and 135 from r horz joint
GE shaft riders- shaft displacement @ bearing locations, absolute
Bently Nevada proximity probes- shaft displacement, relative
T-G Bearings: Double Tilt Pad- 1-5 &13, Shortened Elliptical- 6-12
Thrust Bearing- double thrust runner
LPA Turbine- earth keyed, LPB & LPC also keyed & expand out
Key Phase Reference- in-line w/ GE shaft riders @ 60
Painted Phase reference @ turning gear (LH horz joint), phase angles increase going against rotation
Balance weight access doors at 45?? (RH horz joint)
CHECK: TGSI spike monitor vibr points??, crosscheck against PI screens and Fox 1A screens
[illegible] CAUTION
PEDESTAL CONCERNS- walk basement & 2nd floors, close all doors and vouvers plus 3rd floor PRVs
TEMP SENSITIVE- drop Main Stm & Hot Reheat Temps, by blowing furnace walls, by dropping O2, & not sootblowing
THROTTLE PRESS & VALVE POS- go to sliding press/ drop throttle press & increase valves wide open
LOAD SENSITIVE- drop load 50 to a 100 MW (load other unit), initially vibr may go up

PAD INDICATION	PROBES	Concerns
[illegible]	[illegible]	[illegible]

shaft riders?

U1 HP T1/T2

problems: IP T3/T4

U1 T1+T3 - bearings very load sensitive / thermal sensitivity

Bearing Temp T2 - very low / ΔT between T3+T4 40°

T3+T4 20F above avg 210F

U2

U2 T3+T4 - bearings very load sensitive

IP7011355